

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (Currently amended): In combination:

an electronic probe card for testing a die on a wafer;

said probe card having contacts adapted for electrical engagement with said die; and [[,]]

a removable cover connected to said probe card and positionable in a first position over said contacts of said probe card, said cover being movable to a second position exposing said contacts for said engagement with said die; and,

wherein said cover is movable from said first position to said second position while said probe card is located in a wafer testing machine, and

wherein said cover is not used during testing of said die.

Claim 2 (Original): The combination of claim 1, wherein movement between said first position and said second position is away from said probe card and generally along a Z-axis oriented normal to a plane defined by a bottom surface of said probe card.

Claim 3 (Currently amended): ~~The combination of claim 2~~ In combination:

an electronic probe card for testing a die on a wafer;
said probe card having contacts adapted for electrical engagement with said die; and
a removable cover connected to said probe card and positionable in a first position over
said contacts of said probe card, said cover being movable to a second position exposing said
contacts for said engagement with said die,

wherein said cover is movable from said first position to said second position while said
probe card is located in a wafer testing machine,

movement between said first position and said second position is away from said probe
card and generally along a Z-axis oriented normal to a plane defined by a bottom surface of said
probe card, and

wherein said cover includes an engagement surface for engaging a holder, said holder comprising a mechanical member movable within said testing machine to engage and hold said cover and move it to said second position.

Claim 4 (Original): The combination of claim 3 wherein said mechanical member comprises a robotic element movable generally along said Z-axis and generally along a transverse X-axis.

Claim 5 (Original): The combination of claim 4 wherein said mechanical member moves along at least one track member generally along said X-axis.

Claim 6 (Original): The combination of claim 4 wherein said cover is attached to said probe card with at least one magnet.

Claim 7 (Original): The combination of claim 4 wherein said cover is attached to said probe card with at least one bayonet mount.

Claim 8 (Original): The combination of claim 4 wherein said cover is attached to said probe card with at least one adhesive surface.

Claim 9 (Original): The combination of claim 1 wherein said cover is attached to said probe card with at least one magnet.

Claim 10 (Original): The combination of claim 1 wherein said cover is attached to said probe card with at least one bayonet mount

Claim 11 (Original): The combination of claim 1 wherein said cover is attached to said probe card with at least one adhesive surface.

Claim 12 (Original): The combination of claim 1 wherein said cover includes at least one flange member extending toward said probe card and surrounding said contacts, said cover with said flange member and said probe card forming a sealed space therein, said space comprising a clean space having less than 100 parts per million of particulate matter exceeding one micron in diameter.

Claim 13 (Original): The combination of claim 4 wherein said cover includes at least one flange member extending toward said probe card and surrounding said contacts, said cover with said flange member and said probe card forming a sealed space therein, said space comprising a clean space having less than 100 parts per million of particulate matter exceeding one micron in diameter.

Claim 14 (Currently amended): ~~The combination of claim 1~~ In combination:

an electronic probe card for testing a die on a wafer;
said probe card having contacts adapted for electrical engagement with said die; and
a removable cover connected to said probe card and positionable in a first position over
said contacts of said probe card, said cover being movable to a second position exposing said
contacts for said engagement with said die,
wherein said cover is movable from said first position to said second position while said
probe card is located in a wafer testing machine, and
~~wherein~~ said cover includes an engagement surface for engaging a holder, said
engagement surface being formed in a recess in said cover, said holder extending into said recess
to hold said cover.

Claim 15 (Original): The combination of claim 14 wherein said cover includes at least one
flange member extending toward said probe card and surrounding said contacts, said cover with
said flange member and said probe card forming a sealed space therein, said space comprising a
clean space having less than 100 parts per million of particulate matter exceeding one micron in
diameter.

Claim 16 (Currently amended): ~~The combination of claim 1~~ In combination:

an electronic probe card for testing a die on a wafer;
said probe card having contacts adapted for electrical engagement with said die; and
a removable cover connected to said probe card and positionable in a first position over
said contacts of said probe card, said cover being movable to a second position exposing said
contacts for said engagement with said die,
wherein said cover is movable from said first position to said second position while said
probe card is located in a wafer testing machine, and
~~wherein~~ said cover includes an engagement surface for engaging a holder, said
engagement surface including a key-lock recess for receiving said holder.

Claim 17 (Original): The combination of claim 1 wherein said cover includes an engagement
surface for engaging a holder, said engagement surface including at least one magnet.

Claim 18 (Original): The combination of claim 1 wherein movement between said first position and said second position is away from said probe card and generally along an X-axis oriented parallel to a plane defined by a bottom surface of said probe card.

Claim 19 (Currently amended): ~~The combination of claim 18~~ In combination:

an electronic probe card for testing a die on a wafer;
said probe card having contacts adapted for electrical engagement with said die; and
a removable cover connected to said probe card and positionable in a first position over said contacts of said probe card, said cover being movable to a second position exposing said contacts for said engagement with said die,

wherein said cover is movable from said first position to said second position while said probe card is located in a wafer testing machine,

movement between said first position and said second position is away from said probe card and generally along an X-axis oriented parallel to a plane defined by a bottom surface of said probe card, and

~~wherein~~ said cover moves from said first position to said second position along tracks on said probe card.

Claim 20 (Original): The combination of claim 1 wherein said cover moves from said first position to said second position along a hinge on said probe card.

Claim 21 (Currently amended): ~~The combination of claim 1~~ In combination:

an electronic probe card for testing a die on a wafer;
said probe card having contacts adapted for electrical engagement with said die; and
a removable cover connected to said probe card and positionable in a first position over said contacts of said probe card, said cover being movable to a second position exposing said contacts for said engagement with said die,

wherein said cover is movable from said first position to said second position while said probe card is located in a wafer testing machine, and

~~wherein~~ said cover comprises an openable aperture including movable aperture sheaves.

Claim 22 (Currently amended): A method for protecting an electronic probe card for testing die on a wafer, the probe card having contacts adapted for electrical engagement with said die, comprising the acts of:

providing an electronic probe card for testing a die on a wafer, said probe card having contacts adapted for electrical engagement with the die;
covering said contacts with a cover;
mounting said probe card with said cover in a wafer testing machine; and thereafter,
removing said cover from said contacts while said probe card is in said testing machine to expose said contacts for testing the die in said testing machine, wherein said cover is not used during testing of said die.

Claim 23 (Original): The method of claim 22 wherein said removing includes mechanically holding said cover and moving it generally in a Z-axis direction away from the probe card.

Claim 24 (Currently amended): ~~The method of claim 22~~ A method for protecting an electronic probe card for testing die on a wafer, the probe card having contacts adapted for electrical engagement with said die, comprising the acts of:

providing an electronic probe card for testing a die on a wafer, said probe card having contacts adapted for electrical engagement with the die;
covering said contacts with a cover;
mounting said probe card with said cover in a wafer testing machine; and thereafter,
removing said cover from said contacts while said probe card is in said testing machine to expose said contacts for testing the die in said testing machine,
wherein said removing act is preceded by the act of grabbing said cover with a robotic holder within said testing machine.

Claim 25 (Original): The method of claim 22 wherein the act of covering the contacts includes the act of maintaining a sealed space within said cover around the contacts with a particulate level less than 100 parts per million of particulate in excess of one micron in diameter.

Claim 26 (Original): The method of claim 23 wherein the act of moving the cover in said Z-axis direction is preceded by the act of rotating the cover with respect to the probe card to release it therefrom.

Claim 27 (Original): A covering for an electronic probe card for testing a die on a wafer, the probe card having contacts adapted for electronic engagement with the die semiconductor device, comprising:

a removable cover connectable to said probe card and positionable in a first position over the contacts of the probe card, said cover being movable to a second position exposing said contacts for said engagement with the die; and,

means for engaging a holder wherein said cover is movable from said first position to said second position while said probe card is located in a wafer testing machine by having said means for engaging a holder held by a holder in the testing machine.

Claim 28 (Original): The covering of claim 27 wherein said means for engaging includes a key-lock recess for receiving said holder.

Claim 29 (Original): The covering of claim 27 wherein said means for engaging includes a magnet.

Claim 30 (Original): The covering of claim 27 wherein said means for engaging includes at least one recess in said cover adapted to receive a corresponding holding element in a wafer testing machine .

Claim 31 (Original): The covering of claim 27 and further comprising a bayonet mount on said cover for mounting said cover to the probe card.

Claim 32 (Original): The covering of claim 27 and further comprising a ferro-magnetic mount on said cover for mounting to a corresponding ferro-magnetic mount on the probe card.

Claim 33 (Original): The covering of claim 27 wherein said cover includes at least one flange member extendable toward said probe card for surrounding said contacts, said cover with said flange member and said probe card forming a space therein, said space comprising a clean space having less than 100 parts per million of particulate matter exceeding one micron in diameter.

Claim 34 (New): A probing apparatus comprising:

a plurality of probes configured to electrically engage a semiconductor device to be tested; and

a moveable cover, wherein said cover is moveable between a first position in which said cover covers and protects said probes and a second position in which said probes are exposed for said engagement with said semiconductor device,

wherein said cover is not used to test said semiconductor device.

Claim 35 (New): The probing apparatus of claim 34 further comprising a mounting structure configured to mount said probing apparatus within a testing device, and wherein said cover is moveable between said first position and said second position while said probing apparatus is mounted in said testing device.

Claim 36 (New): The probing apparatus of claim 35, wherein said cover is configured to be engaged by a device for moving said cover from said first position to said second position.

Claim 37 (New): The probing apparatus of claim 35, wherein:

in said first position, said cover is attached to said probing apparatus, and

in said second position, said cover is detached from said probing apparatus.

Claim 38 (New): The probing apparatus of claim 35, wherein said cover is attached to said probing apparatus in said first position and in said second position.

Claim 39 (New): The probing apparatus of claim 38 further comprising a hinge attaching said cover to said probing apparatus, and wherein said hinge allows said cover to move between said first position and said second position.

Claim 40 (New): The probing apparatus of claim 35, wherein:

said cover comprises a moveable aperture,
said first position of said cover corresponds to said aperture being closed, and
said second position of said cover corresponds to said aperture being open.

Claim 41 (New): The probing apparatus of claim 35, wherein in said first position, said cover forms a hermetic seal with said probing apparatus sealing a space around said probes.

Claim 42 (New): The probing apparatus of claim 34 further comprising a sensor configured to record information regarding said cover.

Claim 43 (New): The probing apparatus of claim 42, wherein said sensor is configured to record information regarding first movement of said cover from said first position to said second position.

Claim 44 (New): The probing apparatus of claim 43, wherein said information comprises a date and time of said first movement of said cover from said first position to said second position.

Claim 45 (New): A method for testing a semiconductor device, said method comprising:

providing a probing apparatus comprising a plurality of probes configured to electrically engage said semiconductor device and a protective cover in a first position in which said cover covers and protects said probes;

mounting said probing apparatus within a testing device, said testing device configured to hold said semiconductor device during said testing;

moving said cover from said first position to a second position in which said probes are exposed for said engagement with said semiconductor device;

bringing said semiconductor device into said electrical engagement with said probes; and
testing said semiconductor device,

wherein said cover is not used to test said semiconductor device.

Claim 46 (New): The method of claim 45, wherein said step of moving comprises engaging said cover with a holding device and moving said cover from said first position to said second position with said holding device.

Claim 47 (New): The method of claim 45, wherein said step of moving comprises detaching and removing said cover from said probing apparatus.

Claim 48 (New): The method of claim 45, wherein said cover is attached to said probing apparatus in said first position and in said second position.

Claim 49 (New): The method of claim 48, wherein said step of moving comprises rotating said cover at a hinge attaching said cover to said probing apparatus.

Claim 50 (New): The method of claim 48, wherein said cover comprises a moveable aperture, and said step of moving comprises opening said aperture.

Claim 51 (New): The method of claim 45, wherein in said first position, said cover forms a hermetic seal with said probing apparatus sealing a space around said probes.

Claim 52 (New): The method of claim 45 further comprising sensing and recording information regarding first movement of said cover from said first position to said second position.

Claim 53 (New): The method of claim 52, wherein said information comprises a date and time of said first movement of said cover from said first position to said second position.

Claim 54 (New): A protective apparatus comprising:

a cover configured to cover and protect a plurality of probes configured to electrically engage a semiconductor device to be tested;

attaching means for moveably attaching said cover to a probing apparatus comprising said plurality of probes, wherein said cover is moveable between a first position in which said cover covers and protects said probes and a second position in which said probes are exposed for said engagement with said semiconductor device,

wherein said cover is not used to test said semiconductor device.

Claim 55 (New): The protective apparatus of claim 54, wherein said cover is configured to be engaged by a device for moving said cover from said first position to said second position while said probing apparatus is mounted within a testing device.

Claim 56 (New): The protective apparatus of claim 54, wherein:

in said first position, said cover is attached to said probing apparatus, and

in said second position, said cover is detached from said probing apparatus.

Claim 57 (New): The protective apparatus of claim 54, wherein said cover is attached to said probing apparatus in said first position and in said second position.

Claim 58 (New): The protective apparatus of claim 54, wherein said attaching means forms a hermetic seal with said probing apparatus sealing a space around said probes while said cover is in said first position.